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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/994,642	12/19/1997	TOSHIKAZU YANAI	35.C12444	6853

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EXAMINER

TILLERY, RASHAWN N

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/994,642

Applicant(s)

YANAI ET AL.

Examiner

Rashawn N Tillery

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,13-26,29-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,5,7,9,13,15,19,21,23,25,29,31,33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed July 17, 2002, regarding claim 3, have been fully considered but they are not persuasive.

Regarding Applicant's arguments concerning the Tanaka patent failing to disclose the generation of color difference signals as claimed in claim 3, the examiner respectfully disagrees. The examiner acknowledges the advantages of Applicant's invention and understands the invention as it is described in the specification; however, Applicant's claim language is currently written in a confusing way and thus does not reflect Applicant's invention as it is described. Further, in Applicant's arguments it is discussed, with regards to the Tanaka patent, that Tanaka's color difference signal method "does not disclose one kind of color difference signal, but rather discloses two kinds;" and then Applicant's proceeds to identify the shortcomings of the Tanaka patent stating that Tanaka's color difference signal method "does not disclose different kinds of color difference signals, but rather discloses the same." Albeit, Tanaka teaches two separate color difference methods- line sequential and field sequential, respectively- the teachings imply that either one kind of color difference signal or different kinds can be generated.

Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, Applicant claims that different kinds of color difference signals are generated from a group of a predetermined number of lines; and from every predetermined number of lines, one kind of color difference signal is generated. This claim is written in a confusing way; and thus it is unclear exactly what is generated from these "predetermined number of lines"- one kind of color difference signal or different kinds. Consequently, due to the inconsistencies in Applicant's claim language, the examiner will interpret the claim as it is best understood.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 3, 5, 7, 9, 13, 15, 17, 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (HDTV Single-chip CCD Color Camera).

Regarding claim 3, Tanaka discloses an image pickup device comprising color filters arrays (see figure 6), a plurality of pixels (see section 4-1 where the 2-million-pixel CCD is discussed), a plurality of vertical read-out units (see section 4-1 where the V-CCD is discussed), a horizontal read-out unit (see section 4-1 where the H-CCD), an output unit (inherent feature) and control unit arranged to divide the plurality of pixels on a unit basis of a predetermined number of lines, which includes a plurality of first lines and a plurality of second lines and to add the signals of pixels of first lines and the signals of the plurality of second lines to generate color difference signals (see figure 1 where the control unit is arranged to divide the plurality of pixels on a unit basis of a predetermined number of lines which includes a plurality of first lines and to add the signals of pixels of the plurality of second lines in order to control pixels of the predetermined number of lines so as to generate one kind of color difference signal) (also see section 2. Conventional Color Coding Method, where the color difference signals- R-Y and B-Y- are discussed).

Regarding claim 5, Tanaka discloses the signal charges of two predetermined pixels being added and an image signal corresponding to the added signal charges being outputted from the output unit (see figure 1).

Regarding claim 7, Tanaka discloses adding signal charges of two pixels with signal charges of two predetermined pixels in the diagonal direction (see figure 5).

Regarding claim 9, Tanaka discloses combining a method of adding signal charges in the vertical direction and further adding them with signal charges in the diagonal direction and further adding signal charges in the vertical direction (see Fig. 1 where the added combinations of, " $(Mg + Ye)$," in the vertical direction and, " $(G + Cy)$," in the diagonal direction are further added to signal charges in the vertical direction, " $(G + Ye)$ ").

Regarding claim 13, Tanaka discloses the combination of two predetermined pixels of yellow and green and cyan and magenta (see figure 1).

Regarding claims 15 and 17, see claim 13 above.

Regarding claim 35, Tanaka discloses an image pickup device where the control means effects the control of the pixels so as to generate alternately different kinds of color difference signals on the predetermined number of lines basis (see section 3 and figure 3 where the color difference signals are discussed/shown).

Regarding claim 36, Tanaka discloses a signal processing circuit which subjects the signals output from the output unit to an image processing and an image display unit (see section 4-4 where the color signal process circuit is discussed and section 5-2 where the reproduced image is discussed).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 19, 21, 23, 25, 29, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Kotaki (US5907355).

Regarding claims 19, 21 and 29, Tanaka does not expressly disclose electrodes connected to every fourth pixel. Kotaki reveals, in figure 6, that it is well known in the art to utilize a color CCD where the electrodes are connected to every fourth pixel in a vertical direction (see col. 8, lines 26-41 where the read-out of signal charges is discussed). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Kataki's teachings since a four-phase driver would ultimately decrease charge read-out time.

Regarding claims 23, 25, 31 and 33, Tanaka does not expressly disclose electrodes connected to every fourth pixel. Kotaki reveals, in figure 6, that it is well known in the art to utilize a color CCD where the electrodes are connected to every fourth pixel in a vertical direction (see col. 8, lines 26-41 where the read-out of signal charges is discussed). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to implement Kataki's teachings since a four-phase driver would ultimately decrease charge read-out time.

Allowable Subject Matter

1. Claims 1, 2, 4, 6, 8, 10, 14, 16, 18, 20, 22, 24, 26, 30, 32 and 34 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

RNT
October 7, 2002


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600